



West Approach Seismic Retrofit Project

04-0435V4

September 20, 2004

**Monthly
Construction
Progress
Bulletin
Issue No. 002**



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West Approach Seismic
Retrofit Project

Project Summary

The West Approach project, a seismic project, begins at the 5th street ramps and continues eastward to the San Francisco Anchorage of the San Francisco Oakland Bay Bridge (SFOBB) at Beale Street. The project also includes the retrofit of the West Loop of the TTT.

In 1936, as part of the original San Francisco Oakland Bay Bridge construction, some of the existing West Approach to the SFOBB was completed. Originally, the SFOBB carried both eastbound and westbound automobile traffic on the upper deck, and rail on the lower deck. In the 1950's, the Bayshore viaduct was constructed, and modifications to the West Approach were made that removed the rail system and dedicated the SFOBB to automobile traffic, with the lower deck to eastbound, and the upper to westbound. This configuration stands today.

The West Approach carries approximately 280,000 vehicles per day. The existing westbound structure has five lanes at the Anchorage that transition into three lanes as it spans 4th Street to Rincon Hill. Both directions have lane widths that are approximately 11 feet with no shoulders. Currently, the West Approach is a double-deck structure from 3rd Street to the Anchorage with one foundation system supporting both decks, which is similar to the Cypress Freeway prior to the Loma Prieta earthquake.

The West Approach has three major components:

1. The mainline westbound and eastbound roadways, some portions being double decked, extending from 4th Street to the San Francisco Anchorage of the Bay Bridge
2. The 5th Street on and off ramps and the on and off ramps at Rincon Hill.
3. The TTT ramps, also known as the West Loop, are located between the Fremont Street exit of the Bay Bridge and the TTT building at Mission and First Streets.



The structures to be retrofitted by removal and replacement are:

1. Eastbound Mainline from 4th Street to Rincon Hill
2. Westbound Mainline from 4th Street to the San Francisco Anchorage
3. 5th Street on/off ramps
4. Harrison off ramp
5. Fremont off ramp
6. Sterling on ramp
7. East Loop (1 & 1/2 blocks)

The structures to be retrofitted in-place are:

1. Eastbound and westbound Mainline structures that span 4th Street
2. The Eastbound Mainline between the San Francisco Anchorage and Rincon Hill
3. The TTT West Loop

Upon the completion of the retrofit project, the West Approach mainline and ramps will have the same number of lanes with improved geometrics and widths (including shoulders) where the existing conditions permit. The mainline eastbound and westbound structures will be adjacent to each other at 4th Street and transition to an outrigger configuration from Rincon Hill to the Anchorage in order to tie into the SFOBB. The new mainline structures will be concrete box girders and will have independent foundations of cast-in-drilled-hole piles.

Project Information

Prime contractor
Duration

Tutor Saliba Corporation
1824 Calendar days (5 years one day short)

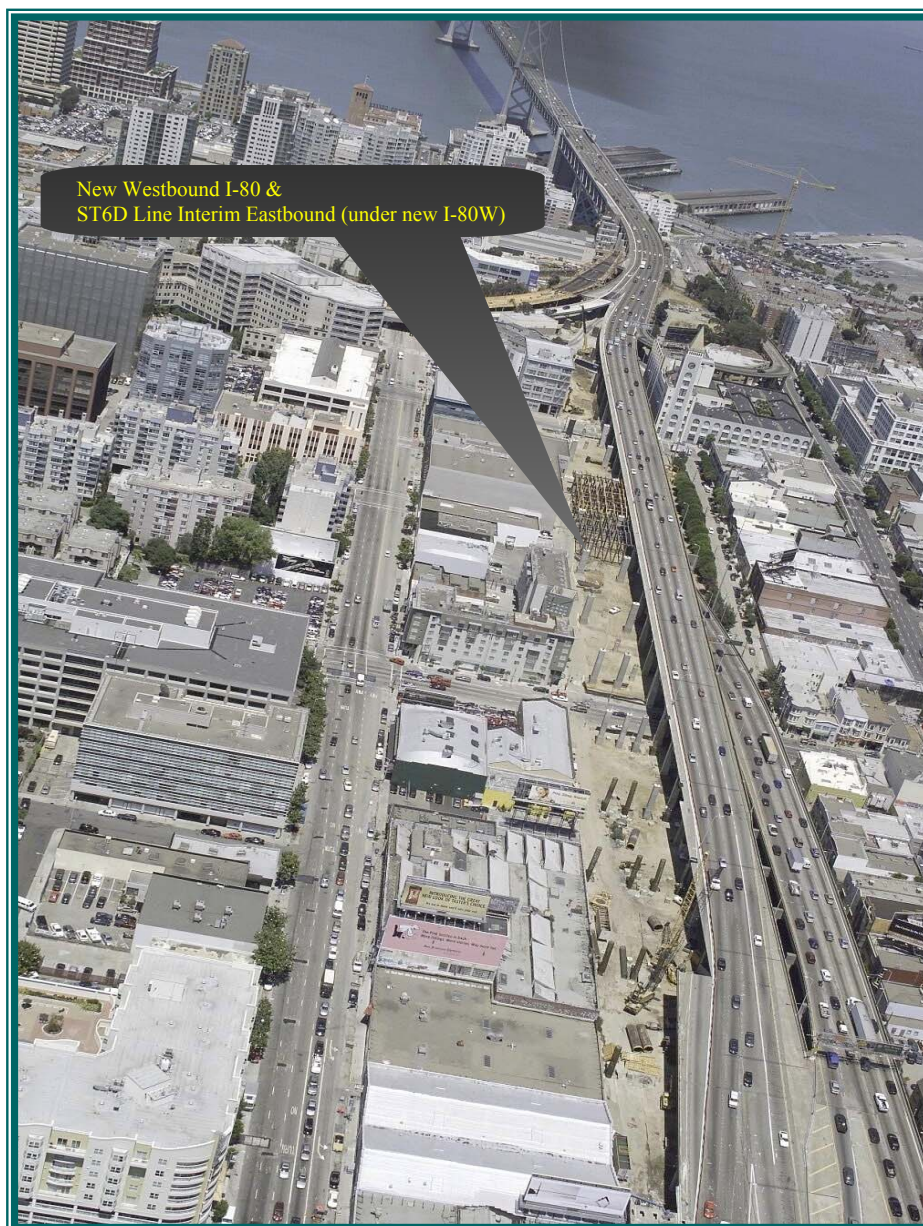
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Project Site (Photos)

New I-80W and ST6D Line



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District 04, Route 80
04-S-804.94/5.9

9/30/2004

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North Housing, New I-80W, UFT Line

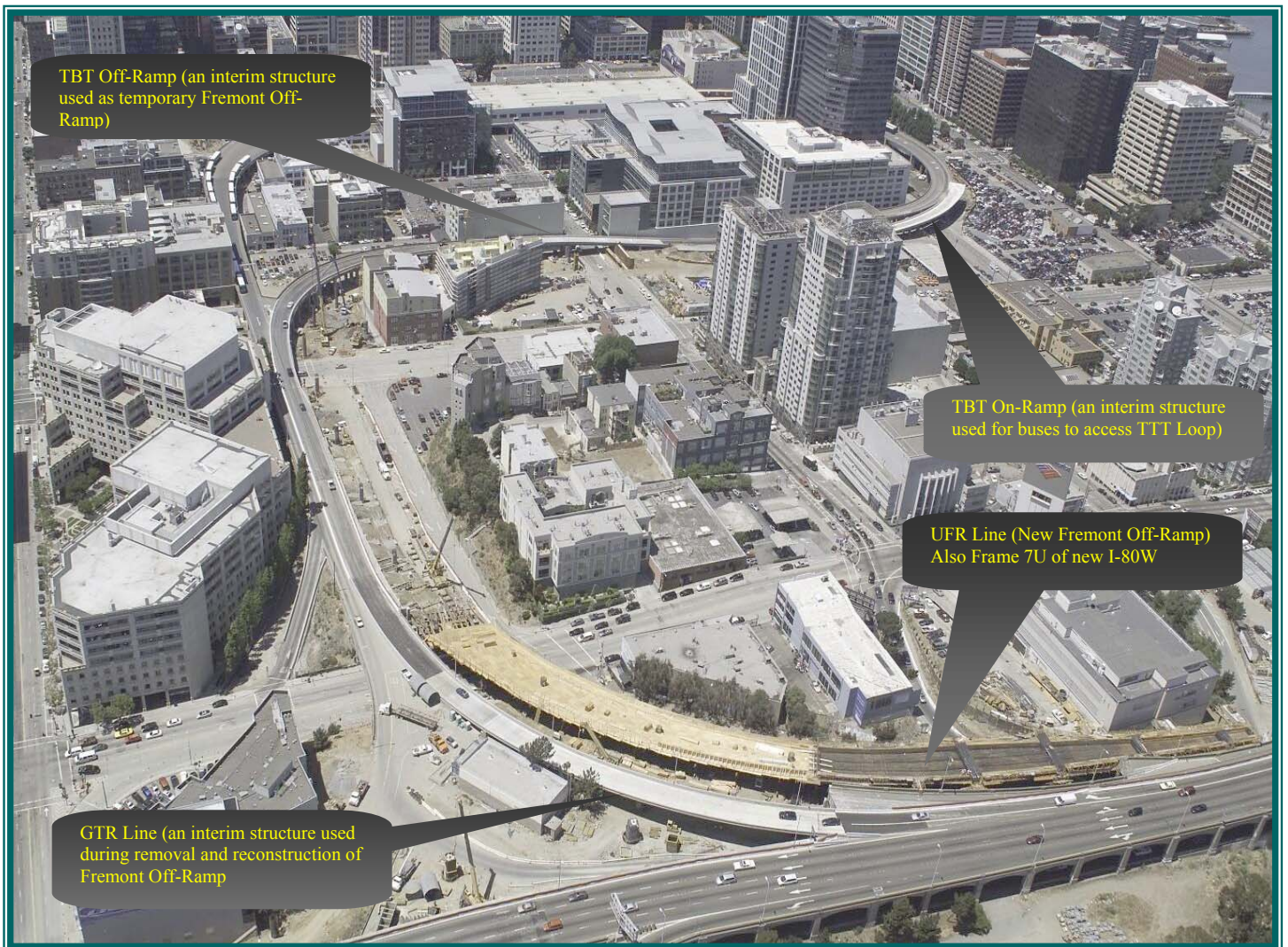


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New Fremont Off-Ramp, TBT On/Off-Ramps, GTR Line, TTT Loop



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Existing 5th St. On/Off-Ramps, T5ON line, Exiting I-80E/W



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Existing First Street On-Ramp & New First Street Retaining Wall





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Accomplishments for the month of August, 2004

Currently the contractor is working on completing pile (bent 34 column 1/left), columns, falsework erection, and placing rebar and concrete for the stem/soffit/deck for the new Fremont Off-Ramp. Construction of MSE walls for the new Folsom off ramp and falsework erection for frames 6, 5, 4, and 3 of the new mainline upper deck are in progress. At 4th street TSC, the contractor, is continuing the retrofit project (installing CIDH piles, enlarging footings, strengthening columns and bent caps, adding a new bent, and removing an existing bent on four bents that spans over 4th street). Demolition of North Housing (West Anchorage) has been completed.

The construction of TBT Turnaround structure is in progress. The contractor has completed all CIDH piles, bents 1 through 6. TSC has completed placing concrete for columns 1 & 2.

Work on construction of interim supports and strengthening existing columns by the West Anchorage has begun. These supports will keep portions of Frames 7 and 8U of Westbound I-80 in use during its removal and replacement.

Abutment one of T5ON, Interim 5th Street off-ramp, has been completed and falsework erection has begun.

- ❑ Interim TBT On-Ramp (bus access from City to the Loop)_(Feb/04) **100% complete**
- ❑ Utility Trench _____(August/04) **100% complete**
- ❑ Interim GTR Off-Ramp _____(April/04) **100% complete**
- ❑ Demolition of existing Fremont Off-Ramp _____(April/04) **100% Complete**
- ❑ HB line – bus access form TTT to the City _____(March/04) **100% complete**
- ❑ Interim TBT Off-Ramp _____(April/04) **100% complete**
- ❑ Mainline – Permanent westbound (over Perry Street, *foundations & columns only*) **98% complete**
- ❑ Mainline – Interim eastbound (beneath the new westbound structure from 3rd Street to west of 2nd Street- ST6D line, *foundations & columns only*) _____ **98% complete**
- ❑ Mainline – Permanent/interim westbound (from S. F. Anchorage to Rincon Hill, *foundations & columns only*) _____ **100% complete**
- ❑ First Street Retaining Wall _____ **85% complete**
- ❑ TL line retrofit – from abutment F to bent 17 (infill walls) _____ **98% complete**
- ❑ Interim First Street On-Ramp (*foundations & columns only*) _____ **95% complete**
- ❑ Interim Essex Street On-Ramp (*foundations & columns only*) _____ **95% complete**
- ❑ Interim UFT line – From S. F. Anchorage to Rincon Hill (*foundations, columns, and bent caps only*) _____ **100% complete**
- ❑ Interim UFT line – From S. F. Anchorage to Rincon Hill (*superstructure: form, placing rebar and concrete for the deck*) _____ **05% complete**
- ❑ UFR line – From bent 19U to Abutment 36 (*foundations & columns only-except bent 34L*) _____

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	100% complete
❑ UFR line – From bent 19U to Abutment 36 (<i>superstructure: falsework, form, placing rebar for stem and soffit, remove form, form for the deck, placing rebar and concrete for the deck</i>)	
	50% complete
❑ 4 th Street retrofit (total of four bents) (<i>foundation only -CIDH Piles</i>)	30% complete
❑ North housing demolition at West Anchorage	100% complete
❑ MSE Wall at Folsom Leg and UFR Off-Ramps	45% complete
❑ Interim 5 th Street Off-Ramp K3A line (corbels)	90.0% complete
❑ Interim 5 th Street On-Ramp (T5ON) (<i>CIDH Piles and columns</i>)	99% complete
❑ Falsework erection – mainline upper deck	60% complete
❑ Falsework erection – UFT Line	100% complete
❑ Falsework erection – UFR Line	98% complete
❑ TBT turnaround (<i>foundation only - CIDH Piles</i>)	100% complete
❑ TBT turnaround (<i>Columns only</i>)	33% complete

UFT Line

The contractor, TSC, has started to place form for the deck. The removal of North Housing at West Anchorage has been completed. Progress on UFT line has been delayed for a month.

UFT line at first will be utilized as part of Westbound mainline and Fremont Off-Ramp. After completion of frames 7 and 8 of new westbound mainline and Fremont off-ramp it will be removed.



UFT Line – from West Anchorage to First Street On-Ramp, North Housing



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UFT Line – from West Anchorage to First Street On-Ramp, North Housing

UFR Line

The contractor continued work on UFR line. UFR line has four frames. Frames 1, 2, and 3 are almost complete. Work on frame 4 is on hold due to pile 34L mitigation plan.

Frame 1 – contractor completed placing concrete deck

Frame 2 – the contractor completed placing concrete for stem and soffit

Frame 3 – the contractor is in process of placing rebar for stem and soffit

Frame 4 – the contractor is erecting falsework

The contractor is working on Pile 34L anomalies

Abutment and touchdown (off-ramp)– both Folsom leg and UFR are in process (MSE walls)

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UFR Line (Abutment and Folsom leg, MSE walls)



UFR Line (Frame 4, pile/column 34L)



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UFR Line (Frames 2, 3, and 4)

Interim 5th Street On-Ramp (T5ON)

Work on interim 5th Street on-ramp began on mid May 2004.

The contractor has completed all columns except column at bent 3

Completed abutment 1

Began erecting falsework



T5ON (interim 5th street on-ramp, Abutment 1, bent 3)

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T5ON (interim 5th street on-ramp, bents 2 – 6, Abutment 1)

4th Street retrofit

Contractor continued drilling for CIDH piles, placing rebar cage, and concrete at bent R-6. Began drill and bond dowels at bent L-6 (existing footing).



4th Street retrofit (drilling for CIDH piles at R-6, drill and bound dowels at bent L-6)

TBT Turnaround

The contractor has completed all CIDH piles for TBT turnaround structure (piles 1 through 6). TSC completed placing concrete for two columns (bent 1 & 2).

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TBT Turnaround Structure – bents 1 through 6